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ABSTRACT

The author considers the relationship between uncontrollable infant crying and child abuse. An integrative scheme is offered from evidence of child abuse literature, experimentally induced infant crying effects, attribution theory, and learned helplessness. It is suggested that infant crying often has causes beyond caregiver control, such as birth status, temperament, and handicap. The author suggests that unpredictable soothing success coupled with a caregiver's belief that the infant is personally responsible for its actions can lead to infant abuse. Successful intervention should aim at assisting parents to redefine their situation and releasing them from beliefs of infant trapped helplessness. (Author/CL)

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Child abuse: the crying baby at risk

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Summary

Being exposed to uncontrollable infant-crying often results in harm to babies or feelings of aggression from parents and other caregivers. By drawing on evidence from child-abuse literature, experimentally-induced infant crying effects, attribution theory and learned helplessness an integrative scheme is offered. Further, it is suggested that infant crying often has causes beyond caregiver control. These causes include birth status, temperament and handicap. An awareness of different infant states and of successful control or alteration of them by caregivers promotes mutual development. It is suggested that unpredictable soothing success coupled with a caregiver's belief that the infant is personally responsible for its actions can lead to baby bashing. Feeling like abusing an infant is not abnormal in this situation. According to the scheme successful intervention would aim at assisting parents redefine their situation and release them from beliefs of infant-trapped helplessness.

Infant crying is much more than unpleasant noise. For instance, several chromosomal abberations have distinctive cry-signature (34). Central nervous system handicaps also have unique patterns (22). It has been documented that cries obtained from different situations (e.g. pain, pleasure, hunger, birth) are both recognisable (34) and discriminable (3). In the sense that a language is a structured communication system it is possible that infant crying is language-like, and worthy of "decoding" by professional investigators.

For the present discussion infant crying will be restricted to effects it produces in parents and other caregivers. Sustained infant crying is a very disruptive signal. After all, it does make good sense that for species survival the immature young should be equipped with a siren demanding of caregiver attention. The impact of an infant's cry has not gone unnoticed by other commentators. For instance one group indicate that "the power of the cry to influence adults is shown not only by the countless parental nurturant acts it evokes but the rage (even murderous rage) it can produce, as attested by annual scores of thousands of battered infants" (31).

Descriptions of the battered child syndrome, suggestions of "at risk" factors, alerting symptoms and other reports often include mention of infant crying as a contributor to abuse (5,6,7,10,14,15,16, 23-26,28,33). In a recent questionnaire carried by a national weekly (20) we asked people to tell us about their own experiences and feelings of infant abuse. When asked: "What did the baby do to make you feel like this?" the most common response was: "crying". There is little doubt in my mind that uncontrollable, sustained infant crying is directly related to baby battering and/or feelings

of extreme aggression toward infants.

Now, given a link between crying and infant abuse, what sorts of explanations may be offered? For if it is possible to provide a satisfactory and testable set of explanations then it may be possible to indicate fruitful lines for intervention. It is the preventative issue which is foremost.

The belief that most newborn infants are similar is misguided and incorrect. Acceptance of this belief places the responsibility for any variations in infant behaviour from what is considered "typical", fairly and directly onto the primary caregivers, usually an infant's parents. Accepting an alternative view, that caregiving behaviours are partially under infant direction, is useful because it opens up possibilities previously unavailable.

The phrase "infant direction" could be interpreted to mean that the infant decides to do some things and to refrain from doing other things. For the present topic the phrase "infant direction" will be employed otherwise. The view is that there may be biological and/or environmental handicaps that lead to particular infant behaviours. It is likely that individual differences among newborns may be indications of variations in genetic composition as well as birth status (e.g. parity, gestation, labour, etc.).

Independently of prematurity, physical handicap and mental retardation is the influence of genetic contributions as manifested in the infant's behavioural style (11). It is apparent that definite temperamental styles can be outlined. These appear to be consistent and to arise from within the baby (32). The major dimensions are: activity, rhythmicity, adaptability, approach, threshold, intensity, mood, distractability and persistence.

Beyond these categories three major temperamental patterns are known as: "slow-to-warm", "difficult", and "easy". Around 10% of the sample were classified as "difficult", displaying irregular biological functions, nonadaptability, mostly negative (withdrawal) responses to new situations, high intensity and frequent negative mood expressions. When one notices that practically all items making up the "mood" and "intensity" categories (4) reference infant crying or fussing, then one may conclude that some infants are born with a disposition toward crying.

Support for this view is available from other sources. One group identified two major groups of infants: cuddlers and non-cuddlers (29). In another study of abused children around two thirds of mothers complained about the child's rejection of cuddling (27). Other work reports differences in the soothability of crying infants (21), which may be sex-linked (36).

Another idea which has become important is called "state" which may be summarily described as the convenient classifications of neonatal behaviours which occur together with some regularity (2). Instead of simply dismissing infant behaviours as random activities, in much the same way that crying may be rejected as unwanted noise, the concept of state attempts to introduce order, at least on the part of the observer. Typically, six states are offered: two for sleeping and four for waking. In sleeping there is <u>deep sleep</u>, characterised by regular breathing, eyes closed, few movements, irregular startles, and <u>light sleep</u> with closed eyes, irregular breathing, smooth movements, low activity level and so on. For waking the states are <u>drowsy</u>, glazed open eyes which have "heavy lids", regular but

shallow breathing, quiet alert characterised by little movement but bright shining eyes which seem to focus on objects, fussing as in quiet alert but with mild, agitated vocalisations, and crying with intense, generalised motor activity (9).

Identification of an infant's state, their patterning and their sequencing is important. Knowing about state existence is useful when attempting state-transfer, especially away from crying. It is possible to "know about" state without being able to say what is going on. Many mothers are able to deal with their infants almost intuitively. They recognise subtle differences in their babies' activity and act accordingly. The idea of "state" allows a caretaker to notice regularity in infant activity: state fluctuations are determined by temperament.

Some laboratory studies add weight to the position advanced earlier; of an assumed link between infant crying and abuse arrived at on the basis of child/infant abuse literature. In short, these studies show that infant crying is aversive.

The first paper to address this issue reported on disruptive effects of an infant-cry sound (19). At the same time as individually - tested people engaged in a conceptually demanding task they listened in one of three sound conditions: no sound, spoken language, infant crying. The sorting task consisted of placing as many Stroop colour-word cards as possible into boxes in a given time period. Onto each card was printed the name of one of five colours in a hue different from its name. For example the word "green" could be printed in blue ink; "red" in green ink and so on. The results obtained from separate groups of males and females with and without childrearing experience were unequivocal. Apart from an effect possibly attributable to time

of testing, early evening, where parents sorted less than nonparents, the only other significant difference was that sorting during infant crying was depressed when compared to the other two noise conditions. There were no sex-related effects; males did not differ from females in susceptibility to the cry sound.

Interestingly, another paper (8) has reported that mothers who described their infants as of a more "difficult" temperament were physiologically less sensitive to changes in infant expressions (cry-to-smile; or smile-to-cry) shown on video tape. Although picture-related sounds were not provided in this tudy results suggest that mothers who have been exposed to stressful infants are physiologically less responsive than those who have not.

An additional paper (13) has explored parental responses to infant stimuli as well as possible differences between mothers and fathers. People viewed one of two separate 6-minute videotapes. Sandwiched between opening and closing shots of a "quiet alert" 5-month old infant were 2-minutes of either smiling and gurgling, or crying. Separate groups were provided with one of three possible descriptions of the infant prior to viewing it: normal, or premature, or "difficult". Crying was seen as being more aversive than smiling, and both physiological and self-report indices point to this conclusion. When the infant was described as "premature" skin-conductance responses were greatest when compared with other labels during parents' observation of the crying but not the smiling infants. Finally, although mothers were more extreme in their self-report measures they did not differ significantly from those of fathers. Neither did the indices of

physiologic activation separate mothers from fathers.

In a further study using much the same methodology parent couples viewed video-films of crying babies (12). This time video clips consisted of either a premature or a term infant accompanied by cry sounds from either premature or term infants. Instead of simply telling viewers they were watching the same infant with different descriptive labels as in the previous study, people were told simply to watch a video-film in which the two infants in each category were different. All filmed infants were due for discharge within the next two days, so the premature infants were already several weeks old. As before, both physiological and self-report data were obtained. The cry of the premature infants produced greater autonomic arousal and was perceived as more aversive than the cry of the normal infant, this was especially so when the signal was paired with the premature face. There were no sex differences in the physiological measures. These authors note that:

> "In the absence of ecological validation, however, the relationship between our findings and "real world" instances of child abuse must be viewed as postulated rather than proven". (p. 497).

So far evidence has been cited to support a view that sustained infant crying seems to be related to incidents of child abuse, and, secondly, that the infant cry signal is a disruptive, aversive stimulus. Missing is a direct link between crying and abuse, that is between infant crying and parents lashing out with uncontrolled aggression or having feelings of doing so. It is this relationship which I now wish to examine. An integrative scheme that borrows from both attribution theory and learned helplessness will be offered.

The scheme is not intended to be exhaustive of all child abuse incidents; it deals with "normal" parents trying their best to cope with a difficult situation, the crying baby.

In summary, the scheme outlines two major possible alternatives: "making it" or "breaking it". These are extreme positions. In "making it" each is sensitive and responsive to the other. In this sense a parent and infant playing together are "making it". So too are the pair when a parent successfully calms a crying baby. It is what happens when the crying does not stop that parents may become desperate; the crying baby is at risk in a sense that the same infant in a cooperative situation is not. Further, it is when pacification techniques have unpredictable outcomes that the situation is primed for "breaking it". The view a caregiver has of the infant's behaviour and of the infant's presumed intentions are important.

Apparently it is a human foible to take what people say at face value. When making assumptions about a person's intentions which are based on behaviours we tend to attribute far more to the person than the situation. It seems that people are reluctant to look at the situation. A review of this topic is available elsewhere (17). If adults make this error for other adults then it is possible adults also make the error for babies. This is one line of research we are following currently. Our expectation is that when some people observe a crying baby their tendency will be to attribute responsibility to the infant rather than the situation. If this is the case then the reports that indicate child-abusers have high developmental expectations for their battered children may be quite consistent with this well-known attribution error.

I now wish to follow this process of explanation from another viewpoint. Consider, if you will, that somebody you know has just passed an examination. According to attribution theorists there are four classes of explanation. Success could be due to either of the following: high ability, easy task, hard work or luck. (e.g. 35). By considering bipolar extremes for internal-external, and stable-unstable a four-cell matrix may be designed. In this plan ability is internal and stable, task difficulty is external and stable, effort is internal but unstable, and luck is external and unstable.

By modifying the original descriptions to suit babies similar categories emerge. These are extremes, designed for illustrative convenience. Stable means a behaviour is either fixed, or lasts for a day or more, or does not change quickly. Unstable means a behaviour is either variable, or lasts for less than a day, or changes readily. Internal means a behaviour is either self-initiated, or genetically based, or intentional, or psychological. External means a behaviour is either initiated from outside, or environmentally based, or accidental, or a contagious disease.

On two separate 7-point scales, one for stable-unstable the other for internal-external, ratings for several infant behaviours have been obtained. These include: wanting to be picked up (internal-unstable), or has a cold (external-stable) and so on. When the results are tabulated the data fall into the cells shown in Figure 1.

Insert Figure 1 about here

A convenient summary of the contents of each cell is offered and shown as Figure 2.

Insert Figure 2 about here

More recently another bipolar dimension has been suggested to overcome shortcomings of the four-cell attribution matrix. The extra one is termed global-specific (1) and cuts across the other two at right angles. In the refinement, "global" factors influence general or universal outcomes whilst "specific" ones are limited to a case or a person. Applying the additional dimension the original cross-tabulation may be expanded as follows:

Insert Figure 3 about here

Now where does all this lead? The function of the attribution matrix is to reduce a stream of events into a manageable framework. For it is likely that once a suitable framework is offered then explanations may be dealt with, and the situation altered when effective intervention is introduced. Without a suitable framework all anybody can do is treat incidents as unique occurrences. The postulated framework offers a cohesive structure from which intervention may be initiated. This scheme has not been tested; it is offered as a working hypothesis.

Consider an occasion when a child comes to a parent in a clinging way wanting help with this and that. For instance:

"Daddy, help me do a drawing, put some music on, let me get the milk with you, etc." "No, leave me alone, can't you see I'm busy?" "But Daddy, please". This parent placed the child's behaviour into the "psychological" cell. In summary, the child is responsible for her behaviour. The consistent message from the parent is: "what can I do to her to be left alone". Also, the fundamental attribution error has been made; the parent has been captured by the situation.*

However, brief reflection could place the child's clinging behaviour into context. Last night she was wakeful, this morning she has a slight cold. Quite quickly the attribution may be shifted from the "psychological" cell to the "medical" one. Notice the change in a parent's behaviour this shift can produce. Instead of wondering what can be done to the child there is concern about what may be done for her.

It is my belief that parents of crying infants can lock themselves into the "psychological" cell as well. By doing so they define the situation in a particular way and respond appropriately. Again, when the child-abuse literature indicates child abusers have high expectations for their infants it may be suggesting that this "psychological" cell is being focussed upon.

Given that this framework is viable then it is clear where intervention will be effective. The first task is to assist parents to redefine the situation, to provide a means of escaping from the "psychological" cell. Going back to Figure 1,notice the items marked with an asterisk. These are important, they are not "psychological" but are unstable-internal. These are the "acceptable" explanations for fussy and crying infants. It is just as well infants "teethe" as often as they do for this helps keep the "psychological" cell empty too. In Figure 3 these items

* the situation is the child.

become "global", common to all infants.

There is one final concept which I wish to introduce. This is known as "learned helplessness", reported initially by Seligman and associates (30). This concept was developed to apply to non-humans and has been extended, with modifications, to humans as well (1). The basic idea is that when behaviour and outcomes are associated in a non-predictable manner the organism learns that responding is of no consequence. In brief, "learning that outcomes are non controllable results in three deficits: motivational, cognitive and emotional. .... "cognitive" in that.... the organism must come to expect that outcomes are uncontrollable..... (M)otivational deficit consists of retarded initiation of voluntary responses and is seen as a consequence of the expectation that outcomes are uncontrollable..... (D)epressed affect is a consequence of learning that outcomes are uncontrollable" (p. 50).

We carried out an experiment along the lines of the original helplessness formulation to examine infant crying effects on subsequent behaviour (18). We sought to look at how disruptive uncontrollable infant crying would be on a task carried out later.

The study was made up of two phases. During the first, individually-tested females were exposed to either white noise or an infant's cry. Before exposure to noise conditions, one of three sets of instructions was provided. For one group no instructions were given other than to listen to the sounds. The remaining participants were told that there may be something they could do to terminate the noise. However only for half those exposed to each sound could successfully stop the noise by pressing a button four times during signal presentation.

These were called the "escape" groups. The remainder were not able to influence noise outcomes as the equipment was disconnected. These were the "non-escape" groups. Sounds were 5-sec. noise bursts provided at different intervals over a 20-min. period but with an average of 14-secs. between presentations. This procedure is common to other learned helplessness studies. The major difference with the present one was the inclusion of infant-crying as a sound.

The purpose of the second phase was to identify effects on people exposed to the different noise conditions of phase one and whether or not they could escape. Twenty anagrams (5-letter words with scrambled letters, e.g. the w rd SHOCK presented on a card as OCHKS) were presented singly. Three separate measures were recorded for anagrams: number of failures, average solution time, and number solved before the solution-key was identified. No differences between the two noises emerged. The results confirmed that people exposed to inescapable sounds appear to learn that behaviour and outcomes are not related, they become helpless and give up.

An implication from this study is that when people are exposed to infant crying and they cannot establish predicable soothing techniques then they are prone to helplessness. They learn that there is no relationship between what they do when trying to console a crying infant and successful soothing. The outcome is almost predictable: feeling like abusing and even abusing the baby.

Now, I would like to present a map which shows postulated relationships between the ideas presented in this paper. It should be stressed that the map is tentative, it is open to

comment, suggestion and correction. However, as a summary it is useful to draw some ideas together and it is suggestive of possible causal links.

Insert Figure 4 about here

Finally, there is the preventative issue. It seems that not until an infant is in the family setting that parents are maximally sensitive to assistance. Before the baby is born many suggestions offered to guide infant care are unheeded. When the crying infant is present affected family members are eager for consolation and guidance. We have coined the term "Crysos" as a derivative of the more familiar word "crisis" to capture this situation.

Procedures for achieving immunization against helplessness for expectant parents are unknown as yet. Additionally, it could be useful to know which of various approaches effectively assist infant-trapped parents to redefine their situation and cope without doing harm to the baby. One way is to simply provide fatigued parents with an opportunity to sleep, separated from their babies. This sort of assistance could be low key, personal and very effective. When we asked parents to tell us how somebody else could best help them during their worst moments the reply was simple. In most cases it was: "Take the infant for a short time and give me a break" (20).

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	internal	external
stable	teething	fever mumps has a cold measles
unstable	wind* overtired* hungry* wanting attention temper tantrum wanting cuddles angry wanting to be picked up	been hit had a toy taken fingers trodden upon fingers jammed

Figure 1. Classical attribution matrix and infant behaviours

	internal	external
stable	genetic	medical
unstable	psychological	accidental

Figure 2. Summary of entries shown in Figure 1 attribution matrix

	global		specific	
	internal	external	internal	external
stable	teething	medical "going around"	temperament	medical "weak" susceptible
unstable	wind hungry overtired	accidental	psychological	accident prone

Figure 3. Reformulated attribution matrix and infant behaviours

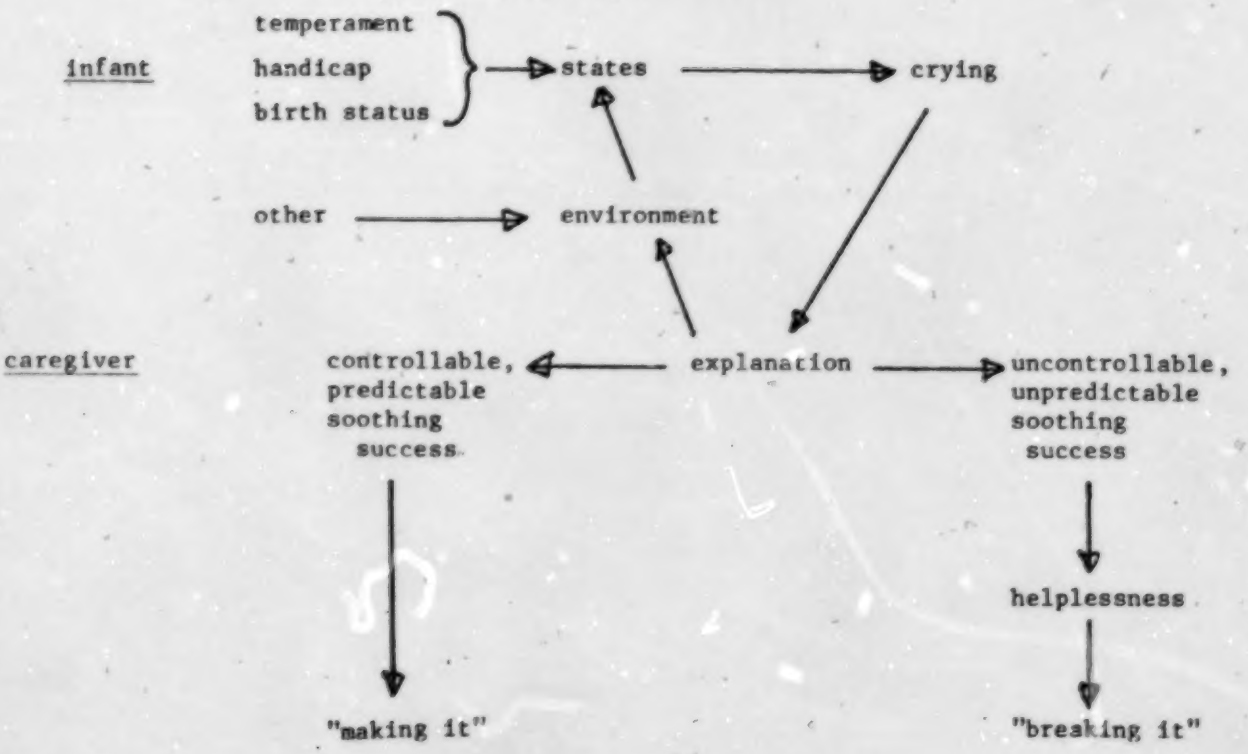

Figure 4. A scheme showing relations between ideas presented in the paper